

REMARKS

Claims 1 to 25 are pending.

Claim 17 has been rejected under 35 USC 112, as use of the term “likely to be used” renders the claim indefinite. This term has been deleted. It is believed that currently amended claim 17 complies with 35 USC 112.

Claims 1 to 25 have been rejected under 35 USC 102 as obvious in view of US Patent Publication 2002/0177991 to Ejerhed (hereinafter “Ejerhed”) and U.S. Patent No. 6,732,094 to Cousins (hereinafter “Cousins”). The applicants respectfully disagree.

In Ejerhed, natural language queries are processed. The queries do not appear to be known, or anticipated. A query, once received, is interpreted in step 102 to generate one or more conditions in step 104. Those conditions are used to extract answers from a database in step 106. Answers that satisfy the generated conditions are extracted. Thus in Ejerhed, a natural language query is used to generate conditions that lead to answers that are contained in the database. This is readily apparent on page 4 – paragraphs [0038], [0039] and [0040] of Ejerhed

“In step 102 a question clause is analyzed in the same way that the natural language text database has been analyzed, i.e. the syntactic function of its constituents and the lexical meaning of its word tokens are determined. Based on this analysis, **a set of conditions for a clause in the natural language text database to constitute an answer to the question clause are defined in step 104.** The conditions are that at least one of the constituents in the question clause should have corresponding constituents in the clause, i.e. constituents that each has the same syntactic function and an equivalent lexical meaning as the corresponding constituent in the question clause.

When the conditions have been defined, **clauses that satisfy the conditions are identified in the natural language text database in step 106 of FIG. 1.** In the identification, the word type of the natural language text database that correspond to a word token in the question clause, and that have a lexical meaning equivalent to the word tokens in the question clause, are identified. Then the word token location identifiers associated with the identified word types are identified in the index. The identified word token location identifiers

are then used to identify the word tokens in the natural language text database that are included in a phrase of the same type as the word token in the question clause is included in, i.e. a phrase that has the same syntactic function. This is done by searching the phrase location identifiers associated with the phrase type that the word token in the question clause is included in, and determining which of the identified word token location identifiers are included in one of these phrase location identifiers. This comparison is done for each of a subset of the word tokens in the question clause, and in addition to determining if the word token is included in the same phrase type, it is determined whether the word tokens are included in the same clause. This can be done easily by determining whether the word token location identifiers are included in the same clause location identifier.

When all the clauses that satisfy the set of conditions have been identified in step 106, portions of text that each comprises one of the clauses that satisfy the set of conditions are extracted in step 108 of FIG. 1. These portions of text may then be presented to a user as an answer to the natural language question, or be further processed." [EMPHASIS ADDED]

In stark contrast, in the present application, and as claimed in independent claims 1, 15, 16, 17, 19, and 25, Boolean expressions (i.e. conditions) are stored (i.e. *a priori*). Each condition is associated with at least one response/answer. It is the stored Boolean expressions that are applied against an input query. As disclosed, the Boolean expressions that are applied to the queries may be stored, because possible input queries are anticipated. The Boolean expressions may thus be constructed with knowledge of the anticipated query, and its most likely answer. As claimed, by identifying which Boolean expressions (i.e. conditions) are satisfied by the query, answers may be extracted. As noted, in Ejerhed, the conditions are satisfied by database entries to extract the database entries which are presented as answers. The conditions are not applied against the input queries. The conditions are generated from the input queries.

The approach of Ejerhed is therefore fundamentally different from the approach of the present invention, as claimed in independent claims 1, 15, 16, 17, 19, and 25.

Cousins appears to disclose methods of evaluating expressions used in database queries. The Examiner appears to rely on Cousins as evidence that Boolean expressions are known, and can be stored. The disclosure of Cousins, however, does little to address the fundamental differences between Ejerhed and the claims, discussed above. Any combinations of Ejerhead and Cousins could thus not lead a skilled person to the invention of independent claims 1, 15, 16, 17, 19, and 25.

On page 4 of the Office Action, the Examiner further asserts

“It would have been obvious to one having ordinary skill in the art at the time of the applicant’s invention was made to substitute defining the condition for retrieving the answer by both defining and further storing the condition for retrieving answer because instead of controlling database size, the substituted teaching would have enhanced the system performance by the availibility of quick Boolean search of conditions for expediting the retrieval of answers and eliminating the need for repeatedly defining the same conditions.”

This comment is simply not understood by the applicants’ agent. Even if, *arguendo*, the conditions used in Ejerhed were Boolean conditions and were defined and stored (which they are not, and likely cannot be because the conditions of Ejerhed are derived from the user query, and thus are likely not known until input by the user), these conditions in Ejerhed are applied to possible answers, and not to the input query as claimed. The motivation/modification suggested by the Examiner, even if supported by the art would not result in the claimed invention.

For all of the above reasons, the rejections of claims 1, 15, 16, 17, 19, and 25, cannot be sustained. Withdrawal of these rejections, as well as the rejections to claims 2-5, 12-14, 18, 20-24 dependent thereon is respectfully requested.

Dependent claims 6-11 have further been rejected under 35 USC 103 in view of Ejerhed, Cousins and US Patent Publication No. 2002/0123994 to Schabes (hereinafter “Schabes”). Applicant’s agent notes that claims 6-11 depend on independent claim 1. Careful of Schabes, reveals that Schabes similarly does not address the deficiencies of Ejerhed identified above. As such, withdrawal of the rejection of these claims under 35 USC 103 is similarly requested.

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It is believed that this application is now in condition for allowance.
Favourable reconsideration and allowance are thus requested.

Respectfully submitted,

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